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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,757	01/29/2001	Mike E. Hamerly	56132USA9A.002	8654

7590

09/18/2002

Attention: Scott A. Bardell  
Office of Intellectual Property Counsel  
3M Innovative Properties Company  
P.O. Box 33427  
St. Paul, MN 55133-3427

EXAMINER

HEALY, BRIAN

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 09/18/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Notice of Allowability

Application No.

09/771,757

Examiner

Brian M. Healy

Applicant(s)

HAMERLY ET AL.

Art Unit

2874

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 01/29/01.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 29 January 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**


7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>6</u> | 6 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

  
Brian M. Healy  
Primary Examiner

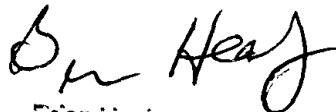
**Art Unit: 2874**

**REASONS FOR ALLOWANCE**

The claimed invention is patentable over the prior art of record because the prior art of record neither teaches nor suggests an optical switch based on a rotating vertical micro-mirror constructed on the surface of a substrate including: at least one input optical fiber arranged to direct at least one optical signal through a free-space along a first optical path parallel to the surface of the substrate, a plurality of output optical fibers arranged to receive the optical signal traveling through the free-space, at least one of the output optical fibers comprising an optical path not co-linear with the first optical path; and at least one substantially vertical, rotating micro-mirror assembly located in the free-space comprising a rotating micro-mirror with a vertical centerline and an axis of rotation both perpendicular to the surface, but not co-linear, the rotating micro-mirror being rotatable between at least one first position not in the first optical path and at least one second position in the first optical path to redirect the optical signal to one of the output optical fibers

These switch features are recited in claims 1-16 and is considered to be patentable over the prior art of record. Any questions concerning this office action should be directed to:

**Brian M. Healy**  
**Primary Examiner**  
**Art Unit: 2874**  
**Phone:(703)308-2693**

  
Brian M. Healy  
Primary Examiner